

COVID-19: Pakistan's Preparedness and response

Perspective

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ABSTRACT

At the end of December 2019, a novel coronavirus (Covid-19) outbreak has been proclaimed in the Wuhan City of China. Several cases have arisen in other cities of China. It spread simultaneously worldwide in 209 countries of Europe, Australia, America, Asia, and Pakistan. Millions of people have been affected while cases are rapidly increasing in the world's high mortality rate. Different controlling strategies have been adopted for COVID-19. Pakistan took rigorous measures like a field hospital, specific laboratories for testing, centers for Quarantine, awareness campaign, Ehsaas Emergency Cash Programme, and lockdown for controlling this virus. There is no antiviral and vaccine-based treatment; only preventive measures are taken.

Keywords: COVID-19, Pakistan's preparedness, SARS-COV, MERS-COV

INTRODUCTION

The novel coronavirus (COVID-19) flared up from Wuhan city of China and spread rapidly. It was declared a public health emergency by the World Health Organization (WHO). The outbreak was thought to have originated from a livestock market.[1] Within a short duration, the coronavirus had rapidly spread to other parts of China. Modern transport methods made it a pandemic. By April 2020, the virus had infected more than 1.4 million people from over 200 nations.[2] On January 30, 2020, the COVID 19 outbreak was the sixth public health emergency declared by WHO.[3] SARS-COV and MERS-COV were previously declared as outbreaks before COVID-19.[4] Spain, France, and Italy are at the peak of pandemic outside of China at the time of writing of this article (May 2020). Fortunately, China has swiftly overcome the outbreak. Since mid-March 2020, the number of cases have dropped. In other countries, especially the United States of America and Europe, the pandemic is at the top. The highest number of cases are in the USA, followed by Italy and Spain .[5] Only a 2% mortality rate was recorded in China.[6]

On February 11, 2020, WHO named Severe Acute Respiratory Syndrome coronavirus 2 (SARS Cov-2) resembled the SARS-COV of 2003.[6] In 1966 First human coronavirus was identified.[7] An Outbreak of SARS-COV had spread in 37 countries and infected 8000 people. MERS-COV infected 2494 people in 27 countries. The total number of deaths was 1658 worldwide due to these two viruses that lead to pneumonia.[8] On February 26, 2020, the Ministry of Health reported the first case of COVID-19 in Karachi while the Federal Ministry of Health reported another confirmed case in Islamabad.[9] Within a few days, confirmed cases were 25 out of 471 suspected cases in Sindh. These positive cases had a traveling history from China, Iran, London, and Syria. The situation is the worst, and positive cases are increasing daily. Different strategies have been planned by Pakistan's government, such as quarantine centers with every city testing laboratories, public awareness, lockdown, and funding against the COVID-19 outbreak.

THE CURRENT SITUATION IN PAKISTAN

According to the WHO's current report, the province-wise breakdown of the total number of cases on April 25 2020 was 12,227. The number of COVID-19 cases in Punjab, Sindh, Khyber Pakhtunkhwa, Baluchistan, Islamabad, Gilgit-Baltistan, and AJK was 5,055, 4,232, 1,708, 656, 214, 307, and 55 respectively. Out of 256 deaths, Punjab, Sindh, Khyber Pakhtunkhwa, Baluchistan, Islamabad, Gilgit-Baltistan, and AJK were 73, 78, 89, 8, 3, 3, and 2



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	Confirmed cases	Deaths	Recovered
Punjab	5,055	73	29
Sindh	4,232	78	18
KpK	1,708	89	24
Balochistan	656	8	14
Islamabad	214	3	9
Gilgit-Baltistan	307	3	15
AJK	55	2	1

Table 1: Facilities of the government of Pakistan against COVID-19 respectively. One hundred ten patients have recovered; Sindh, KPK, Baluchistan, Punjab, Islamabad, GB, and AJK were 18, 24, 14, 29, 9, 15, and 1, respectively. In Pakistan, the recovery rate is 4.8%, and mortality is 1.3%.[10]

The Government of Pakistan is supported by the WHO in strengthening novel coronavirus alertness and response. The WHO has provided Technical guidance, including how to treat affected people, test samples, control infection in health care centers, and communicate with people. A significant risk of transmission of the virus in the world is by air travel. Ministry of Health developed the capacity of diagnostics in the laboratories. Sample collection packing transportation kits and testing guidelines have been provided. Initially, six hospitals have been equipped with special medical supplies for infection prevention and control, such as masks, gloves, thermoguns, gowns, and more. Isolation centers for admitted to suspect cases have been set up. WHO recommends avoiding close contact with affected, frequent hand wash, wearing face-mask in public spaces, and quarantine of patients.[11] The Government of Pakistan has arranged hospitals, quarantine centers, and facilities provided to healthcare workers and patients to fight against this outbreak. Labs are independently free testing for this virus. Pakistan pushed towards telehealth as coronavirus overcrowds hospitals. Our government has established a funding program to support the poor during the lockdown period. In Sindh, there were six hospitals for COVID-19, Punjab 8, In Khyber Pakhtunkhwa 5, Baluchistan 4, Gilgit-Baltistan 3, and Azad Jammu and Kashmir (AJK) 4 hospitals were functional.[7]

Many institutes and private hospitals have been approved as testing centers and are helping the government by providing staff, equipment, diagnostic kits, medicine, and personal protective equipment (PPEs) under a trained Infection prevention and control (IPC) team. Different strategies are followed by healthcare providers to prevent transmission;

1. Early recognition, ensuring triage, and source

HOSPITALS

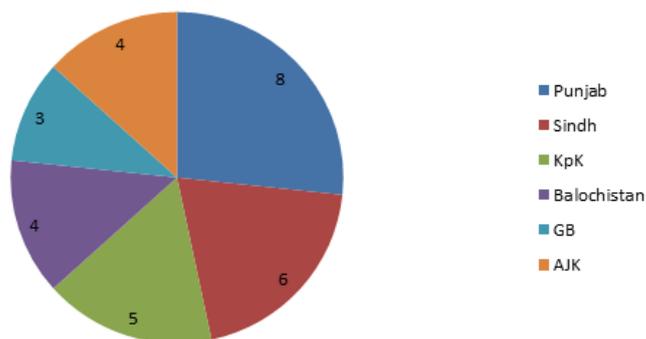


Figure 1: Hospitals for COVID-19 in Pakistan

control (isolating patients with suspected nCOV infection).

2. Applying standard precautions.
3. Additional precautions (avoid physical contact with suspected patients, droplets, and airborne precautions).
4. Implementing environmental controls.

In Pakistan, Isolation wards were built in all provinces, hospitals ICT-02, Sindh-05 Punjab-08, KP-6 Baluchistan-8, AJK-04, and GB-03. Twenty-three thousand eight hundred eighty-six total numbers of beds in isolation wards in Pakistan. KP 2,660 Punjab 10,948 Baluchistan 5,897 Sindh 2,200, AJK 530, GB 972 and capital territory Islamabad 350.[3]

QUARANTINE FACILITIES

The centers used for Quarantine of COVID-19 people vary in all provinces. During a virus outbreak, self-quarantine required that patients isolated themselves from others to reduce the risk of transmission of disease. Quarantine is not always the best solution but effective at minimizing the risk of spread. The Government of Pakistan converted hundreds of institutes and hotels into temporary quarantine centers for public health care; Islamabad has 2, Baluchistan, Khyber-Pakhtunkhwa, Sindh, and Punjab have 12, 52, 4, 8, respectively. Gilgit-Baltistan has 63, and AJK has four being functional in this critical situation.[11]

TESTING CENTERS IN PAKISTAN

Province	No. of hospitals	No. of beds
Punjab	8	10,948
Sindh	5	2,200
KPK	6	2,660
Balochistan	8	5,897
GB	3	972
AJK	4	530
Islamabad	2	350

Table 2; Isolation wards and beds capacity

The world has faced the most significant public health challenge. PCR is an easy method to test for coronavirus. PCR is an initial step to detect viral RNA in the blood. At the time of writing of this article, 45000 tests have been conducted in Pakistan. PCR is being conducted free of cost in the country and laboratories (Punjab-05 Balochistan-02 Sindh-06, KP-01 AJK-01, and GB-02) have been setup across the country. Testing capacity has been increased. The ministry of health is working with the National Institute of Health (NIH) to increase testing laboratories for in the country. The government launched a training program for lab technologists and medical staff to resolve this new outbreak's problems. In molecular labs, more than one hundred molecular biologists were recruited.

FUTURE ASPECTS

After SARS-COV and MERS-COV, COVID-19 spread throughout the world, but Pakistan is a developing country, much populated, the economic situation has the worst, industrial, agricultural has negative growth. During the lockdown period, the closure of essential and non-essential businesses and disruption of the domestic supply chain harm other countries. Hospitals, isolation, quarantine centers, medical staff, and medical facilities are not fulfilled as required. If these are improved, then reduce the chances of an outbreak. Controlling measures should be taken. The virus is spread by sneezing and coughing droplets. Wearing gloves, masks, washing hands frequently is the best chance to staying safe and doing well for public health. Pakistan needs more medical facilities to overcome this outbreak. It is hoped COVID-19 will end soon in Pakistan.

REFERENCES

1. Shanmugaraj B, Malla A, Phoolcharoen W. Emergence of Novel Coronavirus 2019-nCoV: Need for Rapid Vaccine and Biologics Development. *Pathogens*. 2020;9(2):148. Available from: doi: 10.3390/pathogens9020148. PMID: 32098302; PMCID: PMC7168632.
2. Iqbal MS, Haider S, Essa SA, Murtaza M, Maryam S, Sabir MM, Sherwani SK. Coronavirus Outbreak and Characteristics: A Mini-Review. *Pak Jou Microbiol*. 2020;1(1):37-42.
3. Bilgin S, Kurtkulagi O, Kahveci GB, Duman TT, Tel BM. Millennium pandemic: a review of
4. Chudhary SA, Imtiaz S, Iqbal N. Laboratory Detection of Novel Corona Virus 2019 using Polymerase Chain Reaction. *Int J Front Sci*. 2020 Feb 1;4(2).
5. Jiang S, Xia S, Ying T, Lu L. A novel coronavirus (2019-nCoV) causing pneumonia-associated respiratory syndrome. *Cell Mol Immunol*. 2020;17(5):554. Available from: doi: 10.1038/s41423-020-0372-4. Epub 2020 Feb 5. PMID: 32024976; PMCID: PMC7091741.
6. WHO. Naming the coronavirus disease (COVID-19) and the virus that causes it [accessed 2020 May 2]. Available from: [https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it)
7. Hamre D, Procknow JJ. A new virus isolated from the human respiratory tract. *Proc Soc Exp Biol Med*. 1966;121(1):190-3. Available from: doi: 10.3181/00379727-121-30734. PMID: 4285768.
8. Chan JF, Kok KH, Zhu Z, Chu H, To KK, Yuan S, Yuen KY. Genomic characterization of the 2019 novel human-pathogenic coronavirus isolated from a patient with atypical pneumonia after visiting Wuhan. *Emerg Microbes Infect*. 2020;9(1):221-236. Available from: doi: 10.1080/22221751.2020.1719902. Erratum in: *Emerg Microbes Infect*. 2020 Dec;9(1):540. PMID: 31987001; PMCID: PMC7067204.
9. Waris A, Atta UK, Ali M, Asmat A, Baset A. COVID-19 outbreak: current scenario of Pakistan. *New Microbes New Infect*. 2020;35:100681. Available from: doi: 10.1016/j.nmni.2020.100681. PMID: 32322403; PMCID: PMC7171524.
10. Bukhari N, Rasheed H, Nayer B, Babar ZU. Pharmacists at the frontline beating the COVID-19 pandemic. *J Pharm Policy Pract*. 2020;13:8. Available from: doi: 10.1186/s40545-020-00210-w. PMID: 32328285; PMCID: PMC7168565.
11. COVID-19 [accessed on 2020 May 5]. Available from: <https://www.nih.org.pk/novel-coronavirus->

Temporary Quarantine Centers

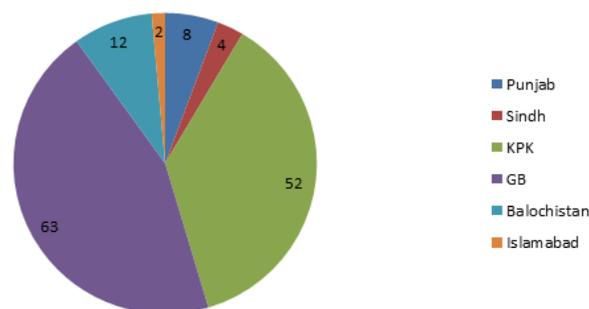


Figure 2: Temporary Quarantine Centre's coronavirus disease (COVID-19). *Exp Biomed Res*. 2020;3(2):117-25.

2019-ncov/

AUTHOR CRediT

SK: Data Curation, Investigation, formal analysis, Methodology

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CONFLICT OF INTEREST

The authors declared no conflict of interest.

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